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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,247	07/30/2001	Pierre Cote	4320-347	9131
7590 09/21/2004			EXAMINER	
Scott R. Pundsack Bereskin & Parr Box 401 40 King Street West Toronto, ON M5H 3Y2 CANADA			MENON, KRISHNAN S	
			ART UNIT	PAPER NUMBER
			1723	
			DATE MAILED: 09/21/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/916,247	<b>Applicant(s)</b> COTE ET AL.	
	<b>Examiner</b> Krishnan S Menon	<b>Art Unit</b> 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 26-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

Claims 26-36 are pending.

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. [09/425,234]: Claims 26-36 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 and 27-38 of copending Application No. 09/425,234.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims recite one or more periodic cleaning steps for membranes with backwashing in which claims differ from one another only in the periodicity of cleaning and/or the strength and nature of the chemical cleaners.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Art Unit: 1723

2. [10/377,647]: Claims 26-36 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 10/377,647. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims recite one or more periodic cleaning steps for membranes with backwashing in which claims differ from one another only in the periodicity of cleaning and/or the strength and nature of the chemical cleaners.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 26-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al (US 5,403,479).

Smith (479) teaches a process of filtering water containing solids by immersing a membrane in a tank at ambient pressure (col 2 lines 63-66 and col 1 lines 53-66) containing the water and providing a trans-membrane pressure, with permeate side subjected to a negative pressure relative to the feed side for the

filtration (Fig 2,7; col 15 line 63-col 16 line 10; see abstract of the ref incorporated in col : US, 5,248,424 to Cote. Et al.), with the permeate side connected to permeate outlet (line 22, and tank 27, fig 2), the membrane aerated (col 16 lines 20-25), backwashing, with wetting the membrane at least once a week (periodicity of this step can be seen in Fig 4) with a cleaning fluid of select concentration, periodically for a select period (col 15 table, lines 16-47, col 18 lines 13-29; col 11 lines 22-61).

Re the limitations 'and a retentate in the tank', it is inherent; what remains in the tank is 'retentate' after 'permeate' is removed from the feed by the process.

Smith discusses about draining the tank during cleaning as in claim 26, but does not advocate draining the tank during the cleaning process as in claim 26 (col 10 lines 64-68, col 11 lines 22-30). However, a reference is no less anticipatory if, after disclosing the invention, the reference then disparages it. The question whether a reference "teaches away" from the invention is inapplicable to an anticipation analysis. *Celeritas Technologies Ltd. v. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998). Also please note "Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments" (In re *Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971)).

Re when to drain the tank, the 'Markhush group' claim language covers all the possibilities there are: before, during or after the cleaning step, with or without overlaps, and therefore, is anticipated by Smith.

Backwashing is done after the permeation step (see col 11 lines 22-61).

Claim 27: The cleaning is between once a day and once a cycle (see fig 6; col 13 lines 50-57).

Claim 28: The cleaning is carried out to maintain an acceptable permeability of the membrane as in instant claim 28 (col 13 lines 50 – 57, col 18 lines 5-12) and the cleaning steps from time to time is to increase the flux and reduce the rate of decline of flux in Smith (col 10 lines 64-68, col 11 lines 22-30)

Claims 29 and 30: The sum of the products of chemical concentration and duration of cleaning between 5,000 and 10,000 min.mg/L or equivalent for another cleaning chemical (col 11 lines 30-35: time less than an Hr, sufficient to diffuse enough cleaning solution ... ; table line 9: NaOCl at 100 ppm, col 15 lines 34-36: cleaning solution at 10 ppm; these provide the CT values within the range claimed). Re the min.mg/L value “per week over a period of at least a month”: Smith does not limit the cleaning process for less than a month – see col 1 lines 18-22, which describes the process as on-going.

Claim 31: recovery cleaning at least one month apart: Figure 4 gives more and less rigorous alternatives for cleaning over a 15-day period, and Smith teaches the cleaning process as a periodic process (col 1 lines 18-22). It may be noted that the type and frequency of cleaning would depend on the water quality and the fouling characteristics of the membrane. Discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art. In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Aller, 42 CCPA 824, 220 F.2d 454, 105 USPQ 233 (1955).

Claim 32: permeate is used as drinking water: intended use of the product made: Smith ref teaches purifying "ground water" in col 20 lines 35-43. Ground water is well known as a source of drinking water. [Also, please note that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)]

Claims 33-35: cleaning at regular intervals, mixing cleaning chemicals in flowing water in permeate side: see abstract and figures of Smith. Re mixing cleaning chemical in flowing water, Smith teaches flowing water containing the cleaning chemical, the cleaning chemical being mixed in the water in a feed tank, which is equivalent. Re backwashing with permeate after backwashing with cleaning chemical, see col 12 lines 56-68.

Claim 36: Membrane is hollow fiber in smith – see abstract.

### ***Response to Arguments***

Applicant's arguments filed 7/16/04 have been fully considered but they are not persuasive.

Arguments that Smith teaches that 'these various processes are undesirable': the rejection is anticipatory. A reference is no less anticipatory if, after disclosing the invention, the reference then disparages it. The question whether a reference "teaches away" from the invention is inapplicable to an anticipation analysis. *Celeritas Technologies Ltd. v. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998). For

the same reason, all the arguments based on the draining of the tank are not persuasive.

Argument that the membrane be wetted once a week with a cleaning chemical after or while draining ...: again, rejection is anticipatory.

Argument that Smith fig 4 relates only to a 17-day trial: length of the trial period being short (or long) does not make the reference any less anticipatory. This was already addressed in the final action.

Re the argument about claim 35, that the cleaning chemical is mixed in to the flowing water, not while it is in a tank: In Smith, water *is flowing* from the tank to the membrane, and therefore, this would constitute addition into flowing water. In any case, it is equivalent, unless the applicant can show with evidence that it does and that difference is unobvious.

Rest of the arguments were already addressed in the previous final action.

### ***Conclusion***

This action is in response to an RCE, and is made non-final because of the newly added double patenting rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 571-272-1151. The



fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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